

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: 206L FWD X-TUBE
Job Number	: 26702		
Estimate Number	: 10553		
P.O. Number	: N/A	Part Number	: D206667103A
This Issue	: 09/08/2006 S.O. No. : N/A	Drawing Number	: D206-667-143 REV B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 19/04/2006 Type : LANDING GEAR	Drawing Revision	: B
Previous Run	: 26321	Material	: N/A
Written By	: <u>SEE COMMENT BELOW</u>	Due Date	: 15/05/2006
Checked & Approved By	: _____	Qty:	1 Um: Each
Comment	: Est Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM		

Job Number:

Seq. #:	Machine Or Operation:	Description :
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10

DC

DOCUMENT CONTROL

Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-103 CHG002

2.0

D6002115

Crosstube material

Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part number	Description	Batch
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1	D6002-115	Crosstube
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Check OD = 2.250"; ID = 1.750"

3.0

MOR|SE|KI|

MORI SEIKI CNC LATHE LARGE

Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA087

2-Turn first side as per Folio FA087

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143.

4.0

QC1

INSPECT ALL DIM TO DIM SHEET

Comment: INSPECT ALL DIM TO DIM SHEET

Date: Wednesday, 09/08/2006 7:35:40 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103A

Job Number:



Seq. #:	Machine Or Operation:	Description :
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5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA087

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143.

3-Polish entire outside surface of crosstube

4-Remove sand and plugs

5-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-143

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 0054.1

9.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D206-667-143 using CNC bender program 206L-fw and Folio FT017

10.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

11.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill all (3) top holes.

Date: Wednesday, 09/08/2006 7:35:40 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103A

Job Number:



Seq. #:	Machine Or Operation:	Description :
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2-Drill and Ream all holes in tube to finish size using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8541 & DT8542 as per Dwg D206-667-143

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-143.

8-C'sink holes as per Dwg D206-667-143. Allow rivet to sit below surface to compensate for paint.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

13.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

14.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

15.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

NIA 2

pmc
06-08-08
See attached
e-mail.
NCR 071

06-08-08

06-08-08

Date: Wednesday, 09/08/2006 7:35:40 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103A

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

N/A

17.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

18.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

19.0

QC14

Inspect Spray Paint



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

20.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2138 f(s)/Unit Total : 1.2138 f(s)

Pick:

Qty Part number Description Batch

2 D2856-400(Cut to 6.94") Abrasion Strip

21.0

D2873043

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043 Nut Plate

N/A

Date: Wednesday, 09/08/2006 7:35:41 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103A

Job Number:



Seq. #:

Machine Or Operation:

Description :

22.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045 Nut Plate _____

23.0

D28911

Support 2.25 dia



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2891-1 Support _____

24.0

MS20601AD4W8



Comment: Qty.: 14.0000 Each(s)/Unit Total: 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W8 Rivet _____

N/A
2

25.0

MS2192020

Clamp (per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-20 Clamp _____

26.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8579. Note: (3) top holes should be facing up.

2-Install supports and clamps as per Dwg D4206-667-143. Torque clamps to 80-100 in lb

3-Install nut plates as per Dwg D206-667-143. Touch-up rivet heads with Imron paint.

Date: Wednesday, 09/08/2006 7:35:41 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103A

Job Number:



Seq. #:

Machine Or Operation:

Description :

27.0

QC5

INSPECT WORK TO CURRENT STEP



NIAZ

Comment: INSPECT WORK TO CURRENT STEP

28.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Remove tube from packaging

2-Apply Armor shield as per DSI 9326

A/R Armor Shield Batch: M101241

20.08.08 (1)

29.0

QC14

Inspect Spray Paint



Comment: Inspect Spray Paint

20.08.08 (1)

30.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

31.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: _____

32.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nut

Batch: _____

33.0

AN57A

Bolt



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:Packing Kit

Qty Part number Description Batch

10 AN5-7A Bolt _____

Date: Wednesday, 09/08/2006 7:35:41 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103A

Job Number:



Seq. #:

Machine Or Operation:

Description :

34.0

AN530A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:Packing Kit

Qty Part number Description Batch

4 AN5-30A Bolt _____

35.0

AN960JD516

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:Packing Kit

Qty Part number Description Batch

18 AN960JD516 Washer _____

36.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

37.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-667-103

Location: _____

PPP Rev: _____

38.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: 206L FWD X-TUBE
Job Number	: 26702		
Estimate Number	: 10553		
P.O. Number	:	Part Number	: D206667103
This Issue	: 4/19/2006 S.O. No. :	Drawing Number	: D206-667-143 REV B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : LANDING GEAR	Drawing Revision	: B
Previous Run	: 26321	Material	:
Written By	: _____	Due Date	: 5/15/2006 Qty: 1 Um: Each
Checked & Approved By	: _____		
Comment	: Est Rev: 05.09.01 Add holes for compatibility with Bell Skid tubes KJ/JLM		

Job Number:



1.0 DC DOCUMENT CONTROL



Photocopy bluefile and create labels as per PPP D206-667-103 CHG002

2.0	D6002115	Crosstube material
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Check OD = 2.250"; ID = 1.750"

B6 06.04.28

3.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143. M8 06/04/29.

4.0 QC1 INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

36 06.04.29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/19/2006 7:35:41 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA087

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143. MS 06/04/29

3-Polish entire outside surface of crosstube MS 06/04/29

4-Remove sand and plugs MS 06/04/29

5-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-143 MS 06/04/29

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

36 06-04-29

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

5.6 06/07/26

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 IT 06-07-26

9.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D206-667-143 using CNC bender program 206L-fw and Folio FT017

PM 06-07-27

10.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

06/07-28

11.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill all (3) top holes. PM 06-07-30

2-Drill and Ream all holes in tube to finish size using drill Jig DT8541 & DT8542 as per Dwg

PM 06-07-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/19/2006 7:35:41 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103

Job Number:



Seq. #: Machine Or Operation: Description :

D206-667-143 Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8541 & DT8542 as per Dwg D206-667-143

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-143.

8-C'sink holes as per Dwg D206-667-143. Allow rivet to sit below surface to compensate for paint.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143

Pm
06-07-31 ①

12.0

QC5

INSPECT WORK TO CURRENT STEP



06-07-31 ①

Comment: INSPECT WORK TO CURRENT STEP

13.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

a.m 06-07-31 ①

14.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



06-08-01 ①

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

15.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: 1757 LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

CY 06/08/01 ①

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

06/08/02 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/19/2006 7:35:41 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

18.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

19.0

QC14

Inspect Spray Paint



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

20.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2138 f(s)/Unit Total: 1.2138 f(s)

Pick:

Qty Part number Description Batch

2 D2856-400(Cut to 6.94") Abrasion Strip

324328/627545

21.0

D2873043

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043

Nut Plate

325052

25 06-08-04

22.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045

Nut Plate

325053

25 06-08-04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

all entries

Date: Wednesday, 4/19/2006 7:35:41 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103

Job Number:



Seq. #:	Machine Or Operation:	Description :
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23.0	D28911	Support 2.25 dia
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Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2891-1

Support 819677 2T 06-08-04

24.0	MS20601AD4W8	
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Comment: Qty.: 14.0000 Each(s)/Unit Total: 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W8 Rivet

M18523 2T 06-08-06

+ 14 MS20601AD4W8 M19191 DP 06-8-8

14
+
14

ATT.
←

25.0	MS2192020	Clamp (per MIL-DTL-8783C)
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Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-20

Clamp

M13791 2T 06-08-04

26.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
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Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8579. Note: (3) top holes should be facing up. 2T 06-08-06

2-Install supports and clamps as per Dwg D4206-667-143. Torque clamps to 80-100 in lb 2T 06-08-06

3-Install nut plates as per Dwg D206-667-143. Touch-up rivet heads with Imron paint. 2T 06-08-06

27.0	QC5	INSPECT WORK TO CURRENT STEP
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INSPECT WORK TO CURRENT STEP



PTO

Comment: INSPECT WORK TO CURRENT STEP

28.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Pick Packing Kit

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06-08-08	24	nut length change to Dwg : estimate. Param. change	PH per QSI 042 06-08-09	06-08-09	14	PH per QSI 042 06-08-09	06-08-08

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 06/08/09
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06-08-08	26	hole oversized in D28 73-048 nut plate, from drilling out rivets. Rivets were no good, due to the stems pulling up through the rivet	PH 06-08-09 per QSI 042	X-tube holes are OK. nut plate replaced.	PH 06-08-08	06-08-08	PH 06-08-09 per QSI 042	06-08-08
06-08-08	26	hole angle deviation.	PH 06-08-09 per QSI 042 see e-mail	See e-mail: NCR 071		06-08-08	PH 06-08-09 per QSI 042 see e-mail	06-08-08

NOTE: Date & initial all entries

Date: Wednesday, 4/19/2006 7:35:41 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103

Job Number:



Seq. #:	Machine Or Operation:	Description :
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29.0	AN532A	Bolt
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Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: M539.9

30.0	MS21042L5	Nut
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Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nut

Batch: M101648

31.0	AN57A	Bolt
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Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:Packing Kit

Qty Part number Description Batch

10 AN5-7A Bolt M18536

32.0	AN530A	BOLT
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Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:Packing Kit

Qty Part number Description Batch

4 AN5-30A Bolt M19512

33.0	AN960JD516	Washer
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Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:Packing Kit

Qty Part number Description Batch

18 AN960JD516 Washer M101369

34.0	QC4	INSPECT 100% KITS FOR COMPLETENESS
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Comment: INSPECT 100% KITS FOR COMPLETENESS

35.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-667-103

Location:

PPP Rev: B

AL 06/28/08
AL 06/28/09 ①

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/19/2006 7:35:42 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L FWD X-TUBE

Job Number: 26702

Part Number: D206667103

Job Number:



Seq. #:

Machine Or Operation:

Description :

36.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

19 06/08/09 (1)

Job Completion



U 808.09

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	26702
Description: Crosstube Assembly (206L High Fwd)	Part Number:	D206-667-143
Inspection Dwg: D206-667-143 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.243	✓			
	1.982	+0.005/-0.000	1.986	✓			
	2.019	+0.005/-0.000	2.024	✓			
	2.058	+0.005/-0.000	2.062	✓			
	2.097	+0.005/-0.000	2.099	✓			
	2.136	+0.005/-0.000	2.139	✓			
	2.176	+0.005/-0.000	2.180	✓			
	2.201	+0.005/-0.000	2.204	✓			
	0.125	+/-0.010	.125	✓			
	0.400 x 30°	+/-0.010	.400	✓			
	R0.063	+/-0.010	.063	✓			
	R0.500	+/-0.010	.500	✓			
	4.438	+/-0.030	4.438	✓			
SIDE B	104.98	+/-0.020	104.98	✓			
	2.240	+0.005/-0.000	2.243	✓			
	1.982	+0.005/-0.000	1.986	✓			
	2.019	+0.005/-0.000	2.025	✓			
	2.058	+0.005/-0.000	2.062	✓			
	2.097	+0.005/-0.000	2.100	✓			
	2.136	+0.005/-0.000	2.140	✓			
	2.176	+0.005/-0.000	2.179	✓			
	2.201	+0.005/-0.000	2.204	✓			
	0.125	+/-0.010	.125	✓			
	0.400 x 30°	+/-0.010	.400	✓			
	R0.063	+/-0.010	.063	✓			
	R0.500	+/-0.010	.500	✓			
	4.438	+/-0.030	4.438	✓			

Measured by: JCL	Audited by: J.G	Prototype Approval:	N/A
Date: 06.04.28	Date: 06/07/26	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.05.06	New Issue (P/O D206-667-103)	KJ/RF	
B	06.03.09	Dwg Rev updated	KJ/JLM	



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED HDS	APPROVED HDS	DRAWING NO. D206-667-143	REV. B SHEET 1 OF 3
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH FWD)	SCALE NTS
A	00.11.17	NEW ISSUE	
B	05.07.26	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASED
05-07-26

Qty	Part Number	Description
X	D206-667-143	CROSSTUBE ASSEMBLY (206L HIGH FWD)
1	D6002-115	CROSSTUBE
2	D2873-043	NUT PLATE
2	D2873-045	NUT PLATE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
4	MS21920-20	CLAMP

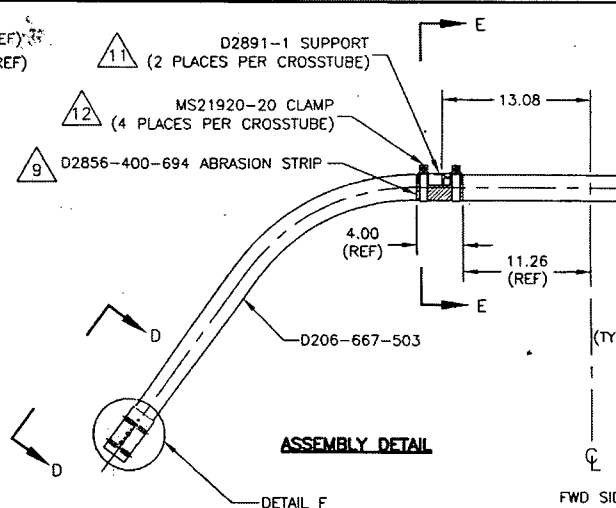
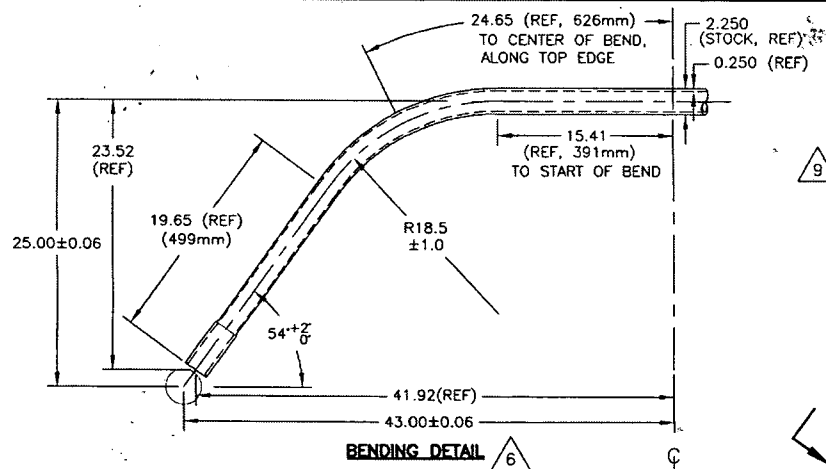
GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6002-115
FINISHED LENGTH = 104.98 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) IT IS OPTIONAL TO SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX 241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

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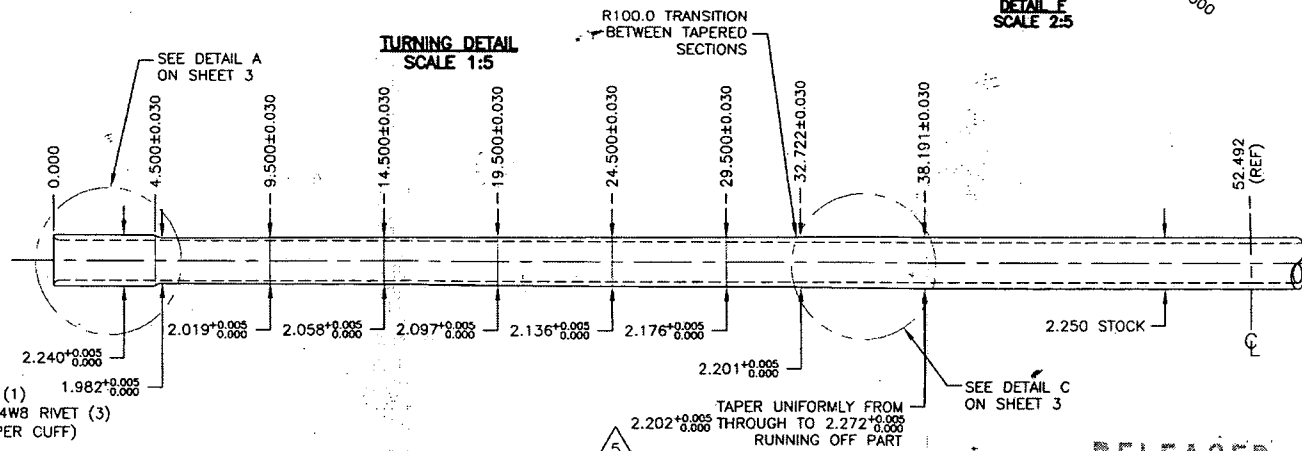
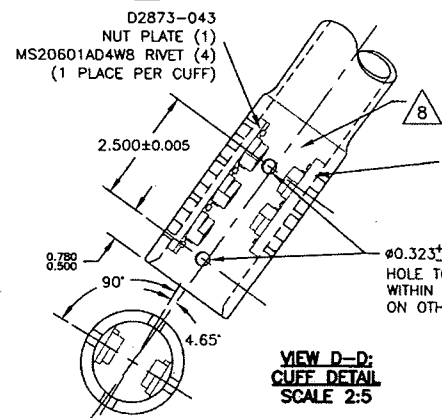
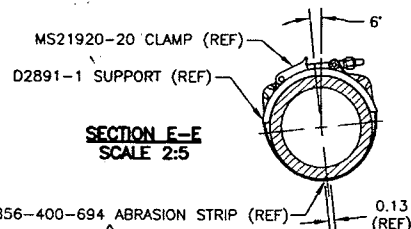


△ B $\phi 0.323^{+0.005}_{-0.000}$
(TYP 5 PLACES PER CUFF)
HOLE TO BE ALIGNED WITHIN ± 0.001
OF HOLE ON OTHER SIDE OF CUFF

PILOT $\phi 0.128$
C'SINK $\phi 0.225 \times 1.00'$
(TYP 7 PLACES PER CUFF)

FWD SIDE ONLY

DETAIL F
SCALE 2:5

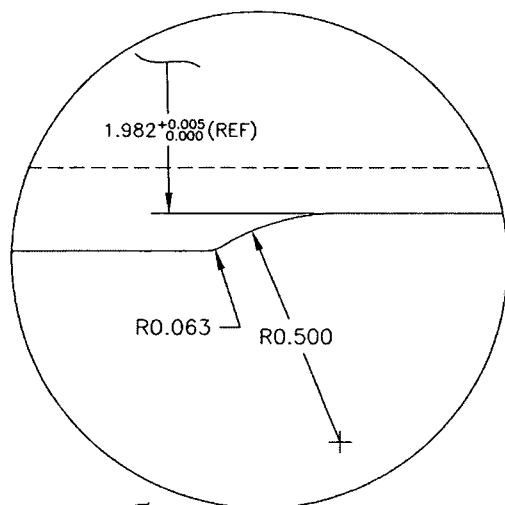
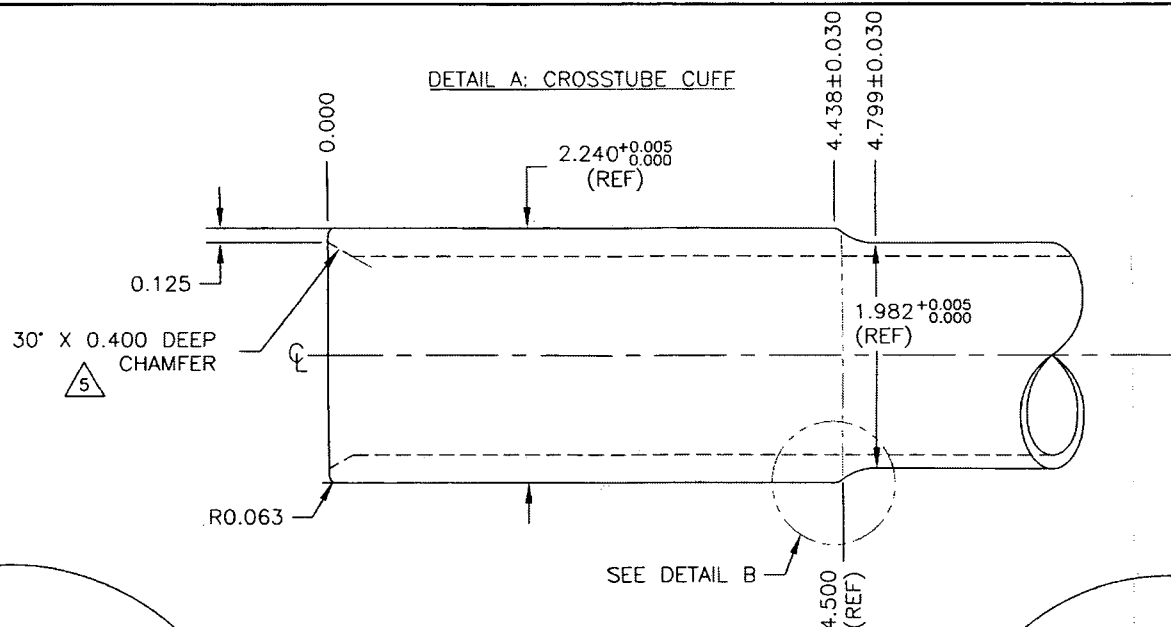


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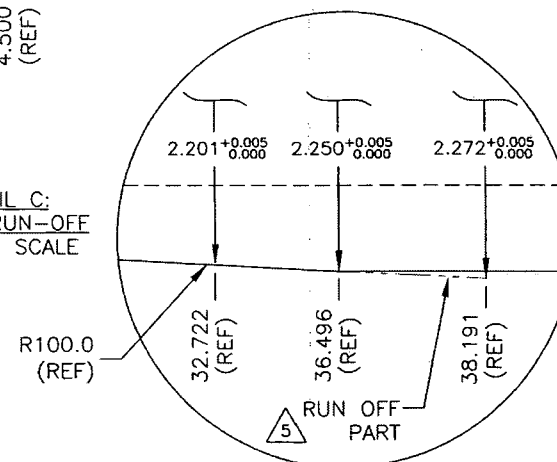
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CHECKED		PH	PH	DRAWING NO.	REV. B
DATE		05.07.26		D206-667-143	SHEET 2 OF 3
				TITLE	SCALE
				CROSSTUBE ASS'Y (206L HIGH FWD)	1:10

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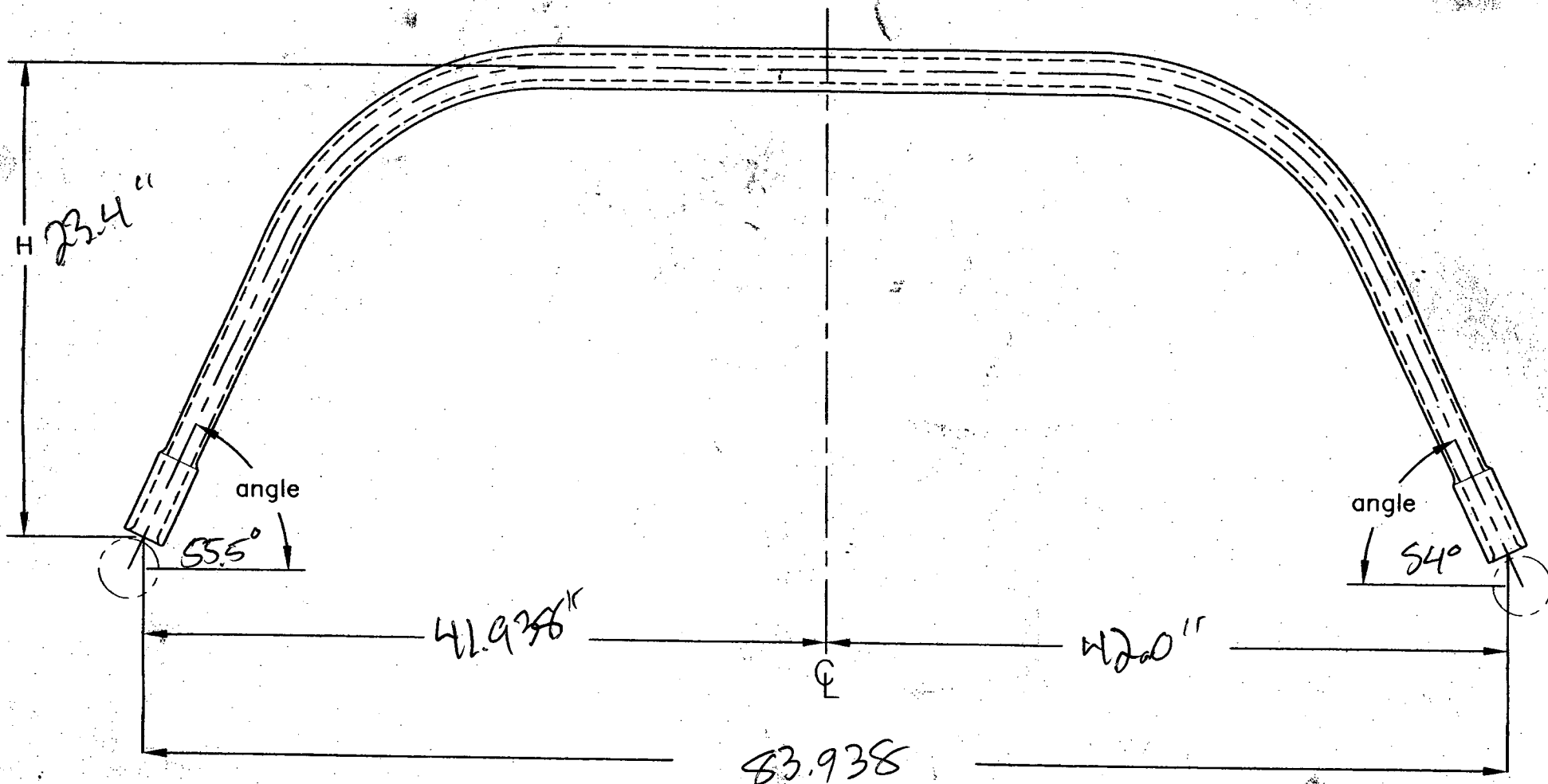


DETAIL C:
TAPER RUN-OFF
NOT TO SCALE



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DATE		05.07.26	TITLE		CROSSTUBE ASS'Y (206L HIGH FWD)		SCALE 1:1



DATE: 06-07-28

DESCRIPTION: D206-067-103

BATCH NO: B26702

DRAWING: D206-067-103 Rev 13

H: $23.52 \pm .06$

1/2 SPAN: $41.92 \pm .06$

TOTAL SPAN: $83.84 \pm .06$

ANGLE: $54 \pm .2^\circ$



1/20

1/20

(1)



HeathAir

INTERNATIONAL (1991) INC.

681 Ave. Lepine, Dorval, Québec H9P 1G3
Tél.: (514) 636-1000 • Fax: (514) 636-0031

W.O. N° 34601

A.M.O. Number: 46/90

NON-DESTRUCTIVE TESTING REPORT

AIRCRAFT / COMPONENT INFORMATION

REGISTRATION:

MODEL/TYPE:

SERIAL NUMBER:

TOTAL HR/LDG:

OPERATED BY:

BASED AT:

INSPECTION REQUIREMENTS

Carry out FPI of four (4) cross tube (external surface) as per ASTM E-1417-05 and the Dart QSI 038, Section 4.1.1 (on file at client) - parts delivered to HeathAir.

Qty. (2) P/N D206-667-103 S/N's B26702 & B26704

Qty. (2) P/N D206-667-203 S/N's B27491 & B27492

☐ RADIOGRAPHY

☐ ULTRASONIC

☒ PENETRANT

☐ MAGNETIC PARTICLE

☐ EDDY CURRENT

INSPECTION REPORT

Fluorescent penetrant inspection was performed in accordance with the above requirements on four (4) cross tubes.

Note: A Level 3 penetrant was substituted for the requested Level 2 (3 is more sensitive)

Ardrox 970P25E Batch #04B503.

Four (4) cross tubes PASSED inspection.

~~THE MAINTENANCE DESCRIBED ABOVE HAS BEEN PERFORMED IN ACCORDANCE WITH
THE APPLICABLE STANDARDS OF AIRWORTHINESS~~

INSPECTED BY: 

DATE August 1, 2006

INSPECTION
STAMP(S) Not Required

CUSTOMER INFORMATION

CUSTOMER: Dart Aerospace

P.O. NUMBER 00001757

ADDRESS:

CONTACT NAME:

LABOUR @

MATERIALS @

TRAVEL EXPENSES @

HOTEL EXPENSES @

\$

GST

PST

INVOICE NO.

TOTAL \$

WHITE COPY - INSPECTION FILE • YELLOW COPY - CUSTOMER • PINK COPY - ACCOUNTANT

Peter Hum

From: David Shepherd [dshepherd@dartaero.com]
Sent: August 8, 2006 4:34 PM
To: 'Peter Hum'
Cc: 'Bill Beckett'; 'Serge Shahbazian'
Subject: FW: re-work of 206B and 206L and 407 crosstubes

Peter,

You will also have to remove and re-install the top clamps in the proper orientation.

David

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: Tuesday, August 08, 2006 2:11 PM
To: 'Peter Hum'
Cc: 'Bill Beckett'; 'Serge Shahbazian'
Subject: RE: re-work of 206B and 206L and 407 crosstubes

As discussed, this is an acceptable repair scheme for these crosstubes.

David

From: Peter Hum [mailto:phum@dartaero.com]
Sent: Tuesday, August 08, 2006 1:16 PM
To: 'David Shepherd'
Cc: Bill Beckett; Serge Shahbazian
Subject: re-work of 206B and 206L and 407 crosstubes

David,

With respect to current stock of the 206B, 206L and 407 crosstubes:

It appears the holes for OEM compatibility were drilled on the incorrect sides (i.e. sides requiring 3 holes only have 2; and sides requiring 2 holes have 3); additionally the nut plates are oriented incorrectly

To correct this problem is it acceptable to perform the following

- 1) The D2873-043/-045 radius blocks are installed on the incorrect sides. Remove the D2873-043/-045 radius blocks from all cuffs
- 2) Drill the required hole for the fwd side of the cuff and install the D2873-043 radius block
- 3) Install the required D2873-045 radius block on the aft side of the cuffs***

***On all affected installations, an extra hole will be present on the aft side of all of the cuffs; affected customers/stock will receive a DSI indicating this.

Peter

09/08/2006